

REMARKS

This is a full and timely response to the non-final Office Action mailed by the U.S. Patent and Trademark Office on October 17, 2007. Claims 1-24 remain pending in the present application. Claims 2, 8, 10, 11 and 17-24 are amended. In view of the foregoing amendments and following remarks, reconsideration and allowance of the present application and claims are respectfully requested.

Drawings

The drawings are objected to. The Office Action alleges that figures 2A and 2B should be designated by the legend "prior art." Applicant has submitted herewith replacement drawing sheet 2 of 7, including the legend "prior art" for figures 2A and 2B.

Accordingly, Applicant respectfully requests that the objection to the drawings be withdrawn.

Claim Objections

Claims 2, 8 and 11 are objected to because of a number of formalities. Applicant has amended claims 2, 8 and 11 as suggested in the Office Action and respectfully request that the objection be withdrawn.

Rejections Under 35 U.S.C. § 101

Claims 17-24 are rejected under 35 U.S.C. § 101 because the claimed subject matter is allegedly directed to non-statutory subject matter. The Office Action states that claims 17-24 are drawn to functional descriptive material, not claimed as encoded or stored on a computer readable medium.

Applicant has amended claim 17 to recite "[a] computer readable medium having a program stored thereon for reassembling asynchronous transfer mode (ATM) data in real time." Applicant has amended dependent claims 18-24 so that they are directed to a "computer readable medium."

Accordingly, Applicant respectfully submits that claims 17-24 are directed to statutory subject matter and respectfully request that the rejection be withdrawn.

Rejections Under 35 U.S.C. § 112, second paragraph

Claims 10-16 and 18-24 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action alleges that the term “the plurality of processing elements” in claims 10 and 18 has no antecedent basis. The Office Action also alleges that claims 18-24 are directed to a program that depends from a computer readable medium.

Applicant has amended claims 10 and 18 to recite “a plurality of processing elements.” Applicant has amended dependent claims 18-24 so that they are directed to a “computer readable medium.”

Accordingly, Applicant respectfully submits that claims 10-16 and 18-24 are in compliance with 35 U.S.C. § 112, second paragraph, and respectfully requests that the rejection be withdrawn.

Rejections Under 35 U.S.C. § 102

Claims 1-2, 9-10 and 17-20 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,999,529 to Bernstein *et al.* (hereafter *Bernstein*).

A proper rejection of a claim under 35 U.S.C. § 102 requires that a single prior art reference disclose each element of the claim. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983). Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. *See, e.g., In re Paulsen*, 30 F.3d 1475, 31 USPQ2d 1671 (Fed. Cir. 1994); *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Cir. 1990). Alternatively, anticipation requires that each and every element of the claimed invention be embodied in a single prior art device or practice. *See, e.g., Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992). The test is the same for a process. Anticipation requires identity of the claimed process and a process of the prior art. The claimed process, including each step thereof, must have been described or embodied, either expressly or inherently, in a single reference. *See, e.g., Glaverbel S.A. v. Northlake Mkt'g & Supp., Inc.*, 45 F.3d 1550, 33 USPQ2d 1496 (Fed. Cir. 1995). Those elements must either be inherent or disclosed expressly. *See, e.g., Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560,

7 USPQ2d 1057 (Fed. Cir. 1988); *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987). Those elements must also be arranged as in the claim. See, e.g., *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989); *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986). For anticipation, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. See, e.g., *Scripps Clinic & Res. Found. v. Genentech, Inc.*, 927 F.2d 1565, 18 USPQ2d 1001 (Fed. Cir. 1991).

Accordingly, the single prior art reference must properly disclose, teach or suggest each element of the claimed invention.

Bernstein appears to disclose a system that combines aspects of time division multiplexing (TDM) and asynchronous transfer mode (ATM) to produce a voice-over-ATM (VoA) internetworking solution. See *Bernstein*, col. 1, lines 56-60. The system disclosed by *Bernstein* appears to process the TDM data and the ATM data in parallel in that a number of modules 230 process at least one type of VoA AAL. Internetworking occurs when a VoA processing module 230 receives a specific VoA AAL. See *Bernstein*, col. 2, lines 61-65.

As shown in FIG. 2, the parallel processing disclosed by *Bernstein* appears to allow a specific VoA AAL to use a TDM bus in a TDM slot reserved for a different VoA processing module. Specifically, *Bernstein* states

Internetworking occurs when a VoA processing module 230 receives a specific VoA AAL. That module processes the information, places the resulting bytes into a TDM1 stream onto TDM bus 260 using the slots reserved for that VoA module, and sends those bytes to TSI 240. TSI 240 then places these bytes onto TDM bus 270 in slots reserved for a different VoA processing module 230. Module 230 takes the byte stream from bus 270, formats the bytes into a cell with a different VoA AAL, and sends the newly-created cell via busses 237 and 239 to ATM Egress circuitry 220 for transmission out of device 200 to ATM network 205.

See *Bernstein*, col. 2, line 65 to col. 3, line 9.

From this it is abundantly clear that *Bernstein* merely converts a specific VoA AAL for use on a TDM channel. Indeed, *Bernstein* fails to mention any segmentation and reassembly of AAL2 and AAL5 ATM data.

Applicant respectfully submits that *Bernstein* fails to disclose, teach or suggest at least “a plurality of parallel processing elements configured to analyze the ATM cells and

determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time,” as recited in claim 1.

Applicant respectfully submits that *Bernstein* fails to disclose, teach or suggest at least “analyzing the ATM cells to determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time,” as recited in claim 9.

Applicant respectfully submits that *Bernstein* fails to disclose, teach or suggest at least “logic for analyzing the ATM cells to determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time,” as recited in claim 17.

Applicant respectfully disagrees with the statement on pages 4 and 5 of the Office Action that *Bernstein* discloses “wherein ATM adaptation layer 2 cells and AAL 5 cells are reassembled in real time (see column 4, lines 63-67, modules can be replaced to support segmentation and reassembly of other adaptation layer types”.

Applicant respectfully submits that col. 4, lines 63-67 of *Bernstein* state:

Preferably, VoA processing module 20 handles the AAL1 formats of voice. This block diagram could also represent AAL5 VoA processing module simply by replacing chip 520 with any one of the AAL5 SAR chip available from, for example, NEC corporation, Integrated Device Technology, Inc., Connectware and Toshiba Corp.

Applicant respectfully submits that nowhere in col. 4, lines 63-67, or elsewhere, does *Bernstein* disclose, teach or suggest at least “a plurality of parallel processing elements configured to analyze the ATM cells and determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time,” as recited in Applicant’s independent claim 1, and similarly recited in Applicant’s independent claims 9 and 17.

Accordingly, Applicants respectfully submit that independent claims 1, 9 and 17 are allowable for at least the reason that they recite features that are neither disclosed, taught nor suggested by *Bernstein*. Further, Applicant respectfully submits that dependent claim 2, which depends directly from allowable independent claim 1, dependent claim 10, which depends directly from allowable claim 9, and dependent claims 18-20, which depend directly or indirectly from allowable independent claim 17 are allowable for at least the reason that they depend from allowable independent claims. *In re Fine*, 837 F.2d 1071, 5 USPQ 2d 1596, 1598 (Fed. Cir. 1998).

Rejections Under 35 U.S.C. § 103

Claims 3-4, 11-12 and 19-20

Claims 3-4, 11-12 and 19-20 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Bernstein* in view of U.S. Patent No. 6,687,250 to Suzuki *et al.* (hereafter *Suzuki*). For a claim to be properly rejected under 35 U.S.C. § 103, “[t]he PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988) (Citations omitted). Further, for a proper rejection under 35 U.S.C. § 103(a), a combination of references must expressly or impliedly suggest all of the features of the claimed invention, *i.e.*, all of the features cited in the claims at issue. *In re Gorman*, 933 F.2d 982, 18 USPQ 1885 (Fed. Cir. 1991). Hindsight reconstruction is impermissible. *See, e.g., Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 19 USPQ2d 1111 (Fed. Cir. 1991). Further, “[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.” *In re Fritch*, 972 F.2d 1260, 1266, 23 U.S.P.Q.2d 1780 (Fed Cir. 1992).

Suzuki discloses a device with controllable segmentation and reassembly SAR functionality for enabling segmentation and reassembly of AAL5 cells. See *Suzuki*, Abstract.

However, *Suzuki* fails to cure the deficiencies of *Bernstein* because the proposed combination fails to disclose, teach or suggest at least all elements of amended claims 1, 9 and 17. Applicant’s claim 1 includes at least “a plurality of parallel processing elements configured to analyze the ATM cells and determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time.” Applicant’s claim 9 includes at least “analyzing the ATM cells to determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time.” Applicant’s claim 17 includes at least “logic for analyzing the ATM cells to determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time.” Applicant respectfully submits that at least these features are not disclosed, taught or suggested by the proposed combination.

Neither is there any suggestion or motivation in *Bernstein* or *Suzuki* to combine the

teachings of *Bernstein* or *Suzuki* to arrive at Applicant's AAL2 and AAL5 reassembly because neither *Bernstein* nor *Suzuki* mention the identification and reassembly of AAL5 and AAL2 cells.

Accordingly, Applicant respectfully submits that dependent claims 3-4, 11-12 and 19-20 are allowable for at least the reason that they recite features that are neither disclosed, taught nor suggested by the proposed combination. Further, Applicant respectfully submits that dependent claims 3-4, which depend indirectly from allowable independent claim 1, dependent claims 11-12, which depend indirectly from allowable independent claim 9, and dependent claims 19-20, which depend indirectly from allowable independent claim 17 are allowable for at least the reason that they depend from allowable independent claims. *In re Fine*, supra.

Claims 5-8, 13-16 and 21-24

Claims 5-8, 13-16 and 21-24 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Bernstein* in view of *Suzuki* as applied to claims 3-4, 11-12 and 19-20 above, and further in view of U.S. Patent No. 5,761,191 to VanDervort *et al.* (hereafter *VanDervort*).

VanDervort discloses an instrument for identifying the types of individual cells in a stream of ATM cells by individually examining the cell header and cell payload information of each cell. See *VanDervort*, Abstract.

However, *VanDervort* fails to cure the deficiencies of *Bernstein* and *Suzuki* because the proposed combination fails to disclose, teach or suggest at least all elements of amended claims 1, 9 and 17. Applicant's claim 1 includes at least "a plurality of parallel processing elements configured to analyze the ATM cells and determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time." Applicant's claim 9 includes at least "analyzing the ATM cells to determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time." Applicant's claim 17 includes at least "logic for analyzing the ATM cells to determine a cell type, wherein ATM adaptation layer (AAL) 2 cells and AAL 5 cells are reassembled in real-time." Applicant respectfully submits that at least these features are not disclosed, taught or suggested by the proposed combination.

Neither is there any suggestion or motivation in *Bernstein*, *Suzuki* or *VanDervort* to combine the teachings of *Bernstein*, *Suzuki* and *VanDervort* to arrive at Applicant's AAL2 and AAL5 reassembly because neither *Bernstein*, *Suzuki* nor *VanDervort* mention the identification and reassembly of AAL5 and AAL2 cells.

Accordingly, Applicant respectfully submits that dependent claims 5-8, 13-16 and 21-24 are allowable for at least the reason that they recite features that are neither disclosed, taught nor suggested by the proposed combination. Further, Applicant respectfully submits that dependent claims 5-8, which depend indirectly from allowable independent claim 1, dependent claims 13-16, which depend indirectly from allowable independent claim 9, and dependent claims 21-24, which depend indirectly from allowable independent claim 17 are allowable for at least the reason that they depend from allowable independent claims. *In re Fine*, supra.

CONCLUSION

For at least the foregoing reasons, Applicant respectfully requests that all outstanding rejections be withdrawn and that all pending claims of this application be allowed to issue. If the Examiner has any comments regarding Applicant's response or intends to dispose of this matter in a manner other than a notice of allowance, Applicant requests that the Examiner telephone Applicant's undersigned attorney.

Respectfully submitted,

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